FORMULATION 2

Ingredient	Amount (wt %)
Compound 6 (Table 1)	0.01
Monobasic sodium phosphate	0.05
Dibasic sodium phosphate (anhydrous)	0.15
Sodium chloride	0.75
Disodium EDTA	0.01
Benzalkonium chloride	0.02
Polysorbate 80	0.15
HCl and/or NaOH	pH 7.3–7.4
Purified water	q.s.to 100%

FORMULATION 3

Ingredient	Amount (wt %)
Compound 7 (Table 1)	0.001
Dextran 70	0.1
Hydroxypropyl methylcellulose	0.5
Monobasic sodium phosphate	0.05
Dibasic sodium phosphate (anhydrous)	0.15
Sodium chloride	0.75
Disodium EDTA	0.05
Benzalkonium chloride	0.01
NaOH and/or HCl	pH 7.3–7.4
Purified water	q.s. to 100%

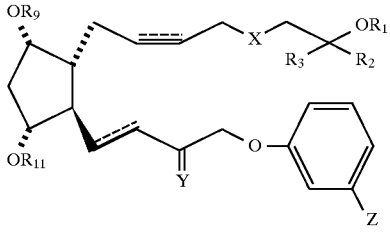
FORMULATION 4

Ingredient	Amount (wt %)
Compound 8 (Table 1)	0.003
Monobasic sodium phosphate	0.05
Dibasic sodium phosphate (anhydrous)	0.15
Sodium chloride	0.75
Disodium EDTA	0.05
Benzalkonium chloride	0.01
HCl and/or NaOH	pH 7.3–7.4
Purified water	q.s. to 100%

The invention has been described by reference to certain preferred embodiments; however, it should be understood that it may be embodied in other specific forms or variations thereof without departing from its spirit or essential characteristics. The embodiments described above are therefore considered to be illustrative in all respects and not restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description.

What is claimed is:

1. A method of treating glaucoma and ocular hypertension which comprises topically administering to the affected eye a composition comprising a therapeutically effective amount of a compound having the absolute stereochemical structure of the following formula (IV), and being substantially free of the enantiomer of said compound:



(IV)

wherein:

R_1 =H; C_1–C_{12} straight-chain or branched alkyl; C_1–C_{12} straight-chain or branched acyl; C_3–C_3 cycloalkyl; or a cationic salt moiety;

R_2, R_3 =H, or C_1–C_5 straight-chain or branched alkyl; or R_2 and R_3 taken together may represent O;

X=O, S, or CH_2;

— - - — represents any combination of a single bond, or a cis or trans double bond for the alpha (upper) chain; and a single bond or trans double bond for the omega (lower) chain;

R_9=H, C_1–C_{10} straight-chain or branched alkyl, or C_1–C_{10} straight-chain or branched acyl;

R_{11}=H, C_1–C_{10} straight-chain or branched alkyl, or C_1–C_{10} straight-chain or branched acyl;

Y=O; or H and OR_{15} in either configuration wherein R_{15}=H, C_1–C_{10} straightchain or branched alkyl, or C_1–C_{10} straight-chain or branched acyl; and

Z=Cl or CF_3;

with the proviso that when R_2 and R_3 taken together represent O, then $R_1 \neq C_1$–C_{12} straight-chain or branched acyl; and when R_2=R_3=H, then $R_1 \neq$ a cationic salt moiety; and

with the further proviso that the following compound be excluded:

cyclopentane heptenol-5-cis-2-(3-αhydroxy-4-m-chlorophenoxy-1-transbutenyl)-3,5 dihydroxy, [1_α, 2_β, 3_α, 5_α].

2. The method of claim **1**, wherein for the compound (IV):

R_2, R_3 taken together represent O;

X=CH_2;

— - - — represents a cis double bond for the alpha (upper) chain and a trans double bond for the omega (lower) chain;

R_9 and R_{11}=H; and

Y=OH in the alpha configuration and H in the beta configuration.

3. The method of claim **2**, wherein for the compound (IV): Z=CF_3.

4. The method of claim **1**, wherein: R_2 =R_3=H, or R_2 and R_3 taken together represent O; X=O or CH_2; R_9=R_{11}=H; Y=H and OR_{15}; and R_{15}=H.

5. The method of claim **4**, wherein: R_1=H, C_1–C_{12} straight chain or branched alkyl or cationic salt moiety; and R_2 and R_3 taken together represent O.

6. The method of claim **5**, wherein the compound of formula (IV) is selected from the group consisting of 3-oxacloprostenol, 13,14-dihydrofluprostenol, and their pharmaceutically acceptable esters and salts.

7. The method of claim **4**, wherein: R_1 =H or C_1–C_{12} straight chain or branched acyl; and R_2=R_3=H.

8. The method of claim **7**, wherein the compound formula (IV) is 13,14dihydrocloprostenol pivaloate.